

CLAIMS

1. A primer surfacer composition for sheeting molding compounds, containing a film forming binder and an organic liquid carrier, wherein the binder comprises:
  - 5 (a) from about 10-90% by weight, based on the weight of the binder, of a low molecular weight silane functional compound with a hydrolyzable group on the silane group and preferably at least one additional functional group (urea, urethane and/or hydroxyl) that is capable of reacting with crosslinking component (d);
  - 10 (b) from about 0-70% by weight, based on the weight of binder, of low molecular weight polyol compound, oligomer or polymer;
  - (c) from about 0-15% by weight, based on the weight of the binder, of a silane coupling agent;
  - (d) from about 10-90% by weight, based on the weight of binder, of
  - 15 melamine formaldehyde crosslinking agent; and
  - (e) from about 0-40% by weight, based on the weight of binder, of a blocked polyisocyanate crosslinking agent.
2. The composition of claim 1, wherein the composition is provided as a one-pack coating.
- 20 3. The composition of claim 1, wherein the composition has a VOC of less than 5 pounds of organic solvent per gallon of the composition.
4. The composition of claim 1 which further comprises coloring and/or extender pigments in a pigment to binder ratio of about 1:100 to about 150:100.
5. The composition of claim 1 which further comprises a conductive
- 25 pigment.
6. The composition of claim 1, wherein the silane functional oligomer is a urethane or urea.
7. The composition of claim 6, wherein the oligomer is formed by first reacting an aminosilane monomer with a cyclic carbonate and then subsequently
- 30 reacting the adduct formed with an isocyanate or polyisocyanate.
8. The composition of claim 1, wherein the silane functional oligomer has a weight average molecular weight in the range from about 500-3,000.
9. The composition of claim 1, wherein the binder further comprises:

(f) from about 0-10% of one or more dispersed particles with at least one functional group (urea, urethane, silane or hydroxyl) capable of reacting with (a) or (d).

10. The composition of claim 1 which further comprises an orthoacetate ester  
5 water scavenger.

11. The composition of claim 1, wherein the composition is at least 50% by weight binder solids.

12. A primer surfacer composition, containing a film forming binder and an organic liquid carrier, wherein the binder comprises:

10 (a) a low molecular weight silane functional compound with a hydrolyzable group on the silane group and preferably at least one additional functional group (urea, urethane and/or hydroxyl) that is capable of reacting with crosslinking component (d);

(b) a low molecular weight polyol compound, oligomer or polymer;

15 (c) a silane coupling agent;

(d) a melamine formaldehyde crosslinking agent;

(e) optionally a blocked aliphatic polyisocyanate crosslinking agent; and

(f) one or more dispersed particles with at least one functional group (urea, urethane, silane or hydroxyl) capable of reacting with (a) or (d).

20 13. A method for reducing the incidence of popping defects appearing on molded SMC and other plastic parts, particularly auto parts, which comprises

applying a layer of a coating composition of claim 1 to a previously sealed SMC part or other plastic part, and

curing said layer on the substrate.

25 14. A plastic substrate coated with a dried and cured layer of the coating composition of claim 1.

15. The coated substrate of claim 14, wherein the substrate is a thermoset reinforced plastic article.

30 16. The coated substrate of claim 14, wherein the substrate is a molded SMC automotive body panel.